

**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Masaki Terashima et al.  
Serial No.: 10/662,587 Art Unit: 2681  
Filed: September 15, 2003  
Title: "ROAD ANTENNA CONTROLLED ON THE BASIS OF RECEIVING RATE"  
Docket No.: 32758US5

**LETTER REQUESTING  
CORRECTED FILING RECEIPT**

Commissioner of Patents  
Office of Initial Patent Examination  
Customer Service Center  
P.O. Box 1450  
Alexandria, Va. 22313-1450

Via Facsimile No.: 703-746-9195

Sir/Madam:

Enclosed is a copy of the Official Filing Receipt for the above-identified application. The receipt contains an error in the "Title" section of the receipt. The section should read as follows:

Road Antenna Controlled on the Basis of Receiving Rate

Please find enclosed a copy of Preliminary Amendment, dated September 15, 2003, and a copy of the return receipt postcard No. 21006, indicating the new title. Please issue a corrected filing receipt for this application and forward the same to the undersigned attorney of record.

Respectfully submitted,

PEARNE & GORDON LLP

By

Michael W. Garvey, Reg. No. 35878

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January 21, 2004

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on the date indicated below.

Michael W. Garvey

Name of Attorney for Applicant(s)

01/21/2004

Date

Signature of Attorney

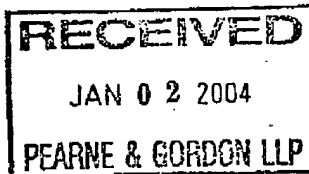


# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/662,587	09/15/2003	2681	750	32758US5	25	2	1

000116  
PEARNE & GORDON LLP  
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CLEVELAND, OH 44114-3108



CONFIRMATION NO. 1272

## FILING RECEIPT



\*OC000000011590638\*

Date Mailed: 12/31/2003

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

### Applicant(s)

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### Assignment For Published Patent Application

Matsushita Electric Industrial Co., Ltd.;

### Domestic Priority data as claimed by applicant

This application is a DIV of 09/603,248 06/26/2000 PAT 6,657,554

### Foreign Applications

JAPAN 11-184170 06/29/1999  
JAPAN 11-191818 07/06/1999  
JAPAN 11-191837 07/06/1999  
JAPAN 11-201732 07/15/1999  
JAPAN 11-202226 07/15/1999  
JAPAN 11-240217 08/26/1999

If Required, Foreign Filing License Granted: 12/30/2003

Projected Publication Date: 04/08/2004

Non-Publication Request: No

Early Publication Request: No

Title

Road antenna apparatus

Preliminary Class

455

Road Antenna controlled on the  
Basis of Receiving Rate

**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

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EV34109963045 No. 21006

Express Mail: MASAKI TERASHIMA ET AL.

Inventor/Applicant: ROAD ANTENNA CONTROLLED ON THE BASIS OF...

Title: ROAD ANTENNA CONTROLLED ON THE BASIS OF...

Serial No. \_\_\_\_\_ Patent No. \_\_\_\_\_ Date: \_\_\_\_\_

Filed: \_\_\_\_\_ Examiner: \_\_\_\_\_

Enclosed Are:

☒ PATENT APPLICATION (NEW-DIVISIONAL)

☐ New Application Transmittal (PTO/SB/OS form)

☒ Fee Transmittal (In duplicate)

☐ Application Data Sheet

☒ Declaration & Power Of Attorney 3 pgs.

10 Pgs. of Claims

25 Sheet(s) of Drawing(s) \_\_\_\_\_ Informal

☐ Formal

☐ Continuation or Division

☐ ASSIGNMENT \_\_\_\_\_ pgs.

☐ Transmittal(s)

☐ Original \_\_\_\_\_ Copies

☒ INFORMATION DISCLOSURE

☒ PTO-1449 2 Rote. Preb. Amend

☒ AMENDMENT (P.P.) - Preb. Amend

in Response to Paper No. \_\_\_\_\_

Priority Documents \_\_\_\_\_ listed below

Other SPECIFICATION (60 pgs)

ABSTRACT

CHECK(S) IN THE AMOUNT(S) OF

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Int. MILB/2003 Date 9/15/2003

ACKNOWLEDGES RECEIPT OF:

17302 U.S. PTO

10/662587

09/15/03

Appl. No. N/A  
Amdt. Dated September 15, 2003  
Preliminary Amendment

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : N/A  
Applicant : Masaki Terashima et al.  
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Title : ROAD ANTENNA CONTROLLED ON THE BASIS OF RECEIVING RATE  
  
Docket No. : 32758US5

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT**

Sir:

Please amend the above-identified application, prior to examination thereof, in the following manner.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 4 of this paper.

Amendments to the Abstract begin on page 5 of this paper.

Remarks/Arguments begin on page 6 of this paper.

Express Mail Label No. EV341099630US

Appl. No. N/A  
Amdt. Dated September 15, 2003  
Preliminary Amendment

Amendments to the Specification:

Please replace the title with the following title:

**--ROAD ANTENNA CONTROLLED ON THE BASIS OF RECEIVING RATE--**

On Page 1, Line 2, please insert the following paragraph:

--This patent application is a divisional patent application of U.S. Patent Application Serial No. 09/603,248 filed on June 26, 2000.

Please replace the paragraph beginning on page 32, line 10 with the following rewritten paragraph:

--FIG. 6 is a plan view of an electric toll collection (ETC) system shown in FIG. 5. The communications area ~~P21~~ F1 is a range in which radio communication can be established between the on-vehicle device 202 and the road antenna 204. The receiver 208 is disposed at a predetermined position on the road R and within the communications area ~~P21~~ F1.--

Please replace the paragraph beginning on page 34, line 18 with the following rewritten paragraph:

--In the present embodiment, four receivers 208A, 208B, 208C, and 208D are disposed at corresponding four corners of the communication area ~~P21~~ F1 formed on the road R. In other respects, the ETC system is identical in structure with that employed in the third embodiment.--

Appl. No. N/A  
Amdt. Dated September 15, 2003  
Preliminary Amendment

Please replace the paragraph beginning on page 34, line 23 with the following rewritten paragraph:

—FIG. 5 is a block diagram showing the structure of a road antenna according to the fourth embodiment. The receivers 208A through 208D disposed at the respective four corners of the communications area ~~F2~~ F1 are connected to the radio controller 206 by way of corresponding control lines 209A through 209B.—

Appl. No. N/A

Amdt. Dated September 15, 2003  
Preliminary Amendment

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3 (cancelled)

Claim 4 (currently amended): A road antenna apparatus comprising:

a road antenna disposed above a road and establishing radio communication with an on-vehicle radio device mounted in a vehicle; and

a laser-beam emitting device which is mounted on the road antenna and radiates a laser beam on the surface of the road; and

a target mark provided on the road to confirm and adjust an angle of the road antenna by way of the laser-beam.

Claim 5 (original): The road antenna apparatus as described in claim 4, further comprising:

a laser-beam receiving device mounted on the road and receiving the laser-beam emitted from the laser-beam emitting device,

wherein the operation of the road antenna is stopped when the laser-beam receiving device cannot receive the laser-beam.

Claims 6-26 (cancelled)



Appl. No. N/A  
Amdt. Dated September 15, 2003  
Preliminary Amendment  
Amendments to the Abstract:

The abstract of the disclosure has been amended in the following manner:

Amendments to the Abstract:

The abstract of the disclosure has been amended in the following manner:

1           A road antenna apparatus includes a road antenna 104 which is mounted on a post  
2           103 and at an elevated position on a road R and establishes radio communication with an  
3           on-vehicle radio device 102 mounted in a vehicle 101 which is traveling over the road; a  
4           controller controls a level of a transmission output signal of the antenna based on a  
5           receiving rate of the transmission output signal, and a laser-beam emitting device 111  
6           which is mounted on the road antenna and radiates a laser beam onto a predetermined  
7           position 113 on the surface of the road. ~~An offset in the angle at which a road antenna is~~  
8           ~~mounted can be readily ascertained on the basis of a distance between a predetermined~~  
9           ~~position on the surface of the road and a position 114 on the road surface onto which a~~  
10           ~~laser beam is actually radiated. A laser-beam receiving device mounted on the road~~  
11           receives the laser beam emitted from the laser-beam emitting device. The controller stops  
12           the operation of the antenna when the laser-beam receiver device cannot receive the laser  
13           beam.

Appl. No. N/A  
Amdt. Dated September 15, 2003  
Preliminary Amendment

REMARKS

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 32758US5.

Respectfully submitted,

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Date: September 15, 2003